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ABSTRACT

Research findings concerned with the relationship between the child's oral language behavior and learning to read are described. A cognitive-biological approach to the child's perceptual system development is taken, and data are presented to support both the developmental point of view of language development and the point of view that the child reconstructs all sensory input. Two critical phases in learning to read are delineated: (1) the child's previous ability to comprehend and decode speech auditorily as a prerequisite to decoding print and (2) the child's understanding of the relationship of spoken speech to the written symbol system for speech. The point is made that oral language is important only in that it may reflect cognitive and perceptual mastery of language, but it is an insufficient and inaccurate predictor of many children's capacity to learn how to read. A bibliography is included. (CM)

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Oral Language and Learning to Read

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This paper attempts to make three distinctions that need to be kept in mind when examining the relationship between the child's oral language behavior and his learning to read or decode print.

This paper first considers a theoretical viewpoint about how the child develops his perceptual system, that is, how he learns to see, to hear, to speak, and then to transfer these skills of hearing, seeing, and speaking to decoding print. The theories discussed in this paper are based on a cognitive-biological approach and are not all-inclusive. The major attempt in this paper is to indicate a basic compatibility between the research findings in the fields of perception and cognition (thinking) and to a theory of how reading skills are learned.

Secondly, the paper attempts to describe the relationship between a child's mastery of his early learnings and his later academic tasks, such as learning to read. In this section, the point of view will be maintained that from birth, the child is in the process of creating his own learning through his active involvement with the environment. The term active involvement in this paper does not necessarily mean physical involvement; rather, it includes perceptual and cognitive involvement -- or more precisely, what is included in the process of thinking and ways of maintaining attention.

Thirdly, this paper discusses research findings of a relationship between the child's oral language production and his reading behavior. What will be suggested is that: there are two crucial factors in learning how to read; first, the child's ability to comprehend language and

secondly, the child's experiential background. Any measure of a child's oral production is seen as a product of these two factors. In addition, it will be maintained that the teacher's ability to diagnose the child's level of cognitive and perceptual development is probably a more critical element in planning instruction than is a measure of the child's oral production.

Finally, data will be presented to support both the developmental point of view of language development and the point of view that the child reconstructs all sensory input. It will be maintained that it is the child who develops the strategies by which his own learning takes place. These data are based on studies done by the author with middle-class suburban children, rural poverty children and inner-city black students. These studies support in part an additional hypothesis which states that it is the child's ability to understand the intent of instruction that is a critical element in achievement. That is, what the teacher plans can be seen as methods to assist the child in focusing on what is to be learned. According to this view, the teacher's role is perceived as planning instructional procedures to maximize the probability of involving the child cognitively. Stated more simply, the teacher becomes more concerned in planning, assessing and evaluating ways in which a child will learn than in determining why he hasn't. An example may help. A second grade teacher in a lower middle school was presenting a lesson on word families (or spelling patterns) to her "slow group". She presented the word "old". A child in the class identified the word and she presented the letter

"b". A child responded with the word "bold". She then presented "c" and "f" with success and then the letter "g". There were no volunteers. She said, "Let's think and I'll give you a hint." She pointed to her watch band and an eager boy responded with the word "gold". She presented the next letter "h", an eager little girl said "I know, I know, silver."

This puzzled both the teacher and her principal who was watching until it was suggested that the child was attempting to learn what she thought the teacher was presenting. The child really didn't understand the instruction and when the word "gold" was given as a hint the child revealed her lack of understanding of the intent of the lesson. However, she was listening, she was motivated, and she didn't understand the intent. This "boner" is not an error or stupidity on the child's part but an example of the active mind of a child trying to create structure and knowledge based on her perceptual and thinking process.

Two bibliographies are available from the author upon request. One is composed of references of language acquisition studies, the other contains references of the relationship of oral language and reading behavior. Only those references critical to the overall point of view will be mentioned here.

The Theory:

Most children learn to perceive and think in the same way. Teaching methods and curriculum materials are based on that assumption. When children do not perform according to normal expectations, teachers are confronted with a major problem in deciding how to present material

to children. Too often, the alternative for the teacher is another set of material which may appear to be different but are basically built on the same average expectations about children's acquisition of perceptual and cognitive abilities. An example may help. If a teacher is using a look-say approach in teaching reading and a child experiences difficulty mastering the material, the teacher may turn to a phonics approach. It is my contention that most children will do as well in one system as the other. The basic question should not be an either-or type decision between different approaches built on the same underlying assumption. That is for most normal six-year-olds, almost any of the known systems of teaching reading will do as well as any other if we look at mastery of graphemics (Farr). Both the phonetics and the look-say approach assume that the child has had normal cognitive development, adequate perceptual systems and has a fairly well-developed language system and, most important, has learned how to master artificial (that is not created by nature) symbol systems. Here an example might help. John was a black, rural southern child whose speech appeared to be inarticulate and, in our naivete, thought to have been poorly developed. We saw John as having a language handicap. When John was asked to respond to the Peabody Language Development Kit, he named objects: boy, window, bed, etc. He didn't respond more fully. His score was very low. John was a member of an experimental elementary poverty program where a great number of new innovations were being tried. Only one of those techniques will be used here as an example. Using the technique of having him dictate his own story in response to a picture he drew we obtained the following:

I Saw an Indian Tent

It was not only one,

it was four

And clouds were circling around the tents
and a bright shine.

The sun came out and the sky turned blue
with a yellow light in the sky.

One Indian said, "It is the sun that
is making yellow on the ground."

Later he dictated:

This is a mountain in San Francisco.

I saw some people swimming and a
little path leading high up in the mountain.
And the trees were shaking.

One tree was bent.

The other tree was straight.

They were some Christmas trees high up
in the mountain.

I saw them.

A little house made smoke and the
wind whirled by and made a wave
of the water.

And the trees did not look alike.

The sun came out and a bug came out
of the sand.

Then later:

I Saw a Stop Sign

I was walking up the blue grass and
it was some little girls walking up
the mountains.

And one little girl had a bag in her
hand with her lunch in it.

The other little girl had a lunch box.

He said to himself that I do not see
why they have things alike.

And the little boy thought to himself
that the stop sign's pole looked like
the words and he knew how to spell 'stop'.

He know what it meant.

Do not go across the street when cars come.

And he thought that the stop sign top
looked like the red light

He knew what the red light meant.

He knew what the green light meant.

He knew what the yellow light meant.

He knew how to spell stop:

S-T-O-P

And that is how.

John possessed a far greater facility with language than we could
have assessed from the ITPA, the Peabody, or our own classroom observa-

tions. What we taught him was that his oral production was important in school and that words stood for things he had experienced and later, as evidenced in the stop sign poem, that letters stood for words.

It may then be well to consider how normal children develop perceptual and thinking skills. There is ample evidence to suggest that children learn how to hear and that they learn how to hear before they learn how to speak (Irwin-Tripp & Nash). Piaget suggests that children learn through their own active involvement with the environment. In part, these learnings are a product of heredity (a healthy functioning body); in part, they are dependent upon maturation of functions; and in part, they are dependent upon the environment. Environment is defined as the nature of the child-rearing practices, the economic level of the family and nutrition. A critical addition to this list is the child's motivational system which propels him towards manipulating the environment through his perceptual systems. It is through the child's own active manipulation of the environment that what we call intelligence is developed. This motivational system is very close to what others have called curiosity, what Robert White has called "competence" or what Piaget means when he states, "In the last analysis, it is the need to grow, to assert oneself, to love, to be admired that constitutes the motive force of intelligence."

Prior to performance the child has explored the stimulus perceptually (Gibson, Maccoby, Maccoby & Conrad) and learned to recognize, hear, or, for example, before the child can say a word he must understand the word, before he can grasp an object, he has recognized it can be grasped. This point of view suggests that the child learns to perceive distinctive

features of an object. For example, he learns to distinguish his mother's face and her voice from his father's face and voice, and further, to recognize variations in speech sounds from siblings and others. In general, development proceeds from globally undifferentiated state (random, physical movement in motor development, babbling in language development) and development progresses as maturity progresses. By 'progresses' is meant being able to categorize (dog), extract similarities (all dogs), subsuming narrow categories into more comprehensive ones (animals), convert more comprehensive ones into specifics (poodle). This view suggests that learning is the growth in a child's ability to make finer and finer discriminations.

The early years of a child's life are composed not only of the more demonstrable physical attainments of sitting, walking, running, but also of the perceptual skills of learning the distinctive attributes of sounds in speech. This is a major attainment, for the child must distinguish speech of wide variations of the same word from speaker to speaker, with added distinction made due to accent, intonation, speed and volume.

In terms of total perceptual development, the child appears to search for regularities in spite of irrelevant differences. That is, the word or phrase is the same regardless of who or how it is presented. "I'm going", "I'm gonna", "I go", "I done gone" are basically the same message. In essence, it is the content of the message that is involved in auditory perception rather than the child's own production or variant of what was produced. For example, the black inner-city child who, when asked to repeat the sentence, "I asked him if he did it and he said he didn't do it" says, "I asks him did he did it and he says he didn't

do it," is, in terms of his own system, repeating the sentence correctly. He didn't change what is invariant in the sentence, that is, he retained the critical elements of the message. Perceptual development becomes less random and more specific, attention becomes more selective (what teachers call longer attention spans), the child is able to ignore irrelevancies and able to filter out extraneous inputs.

The child's perceptual ability to detect regularities in order and structure with the environment is basic for cognitive functioning. What the child appears to accomplish is, initially, the development of basic thinking mechanisms based on physical-motor involvement (including hearing and seeing), and, secondly, the development of language. Language is thought to be subservient to cognition but later facilitating thinking. In the process, the child develops an internal structure with which he rehearses and reformulates all incoming messages and his recall or memory is based on that system. That is, what is stored in the brain is what the child has structured, not a carbon copy of what has occurred. The accuracy of what the child stores is related to the biologic-experiential factors that were stated above but it is the child who must understand the information to be stored. If he does not, the information is not stored, or "remembered" exactly as an outsider perceived it.

I believe this position accounts for a great deal of observed pupil behavior--the children's funny quips in response to meaningless material. The child's reconstruction of what he heard can only be understood in terms of the child's own structure. Neisser, Bartlett, Gibson and others would suggest that any act of memory is actually the child's re-

construction of what he saw, felt or heard.

Thus the relationship of oral language and reading behavior can be reduced to two critical phases. One, the necessity of the child to "learn" the relationship of spoken speech to the written symbol system for speech, graphemics, i.e., print. The child must discover the regularities of print and come to develop a decoding system consistent with the code. Secondly, the child's previous ability to comprehend and decode speech auditorily is critical to decoding print. If he is to reconstruct print, he must be able to match the regularities of print with the regularities of his stored auditory perceptions. That is, he has to recognize the printed word as ones he already knows.

Thus oral language is important only in that it may reflect cognitive and perceptual mastery of language but is an insufficient and inaccurate predictor for many children of their capacity to learn how to read. What is important in learning how to read print are letter-sound relationships of reading and spelling patterns that transfer from word to word and across words which the child uses as "basics" to build his own structure of graphemics. The child's own motivational system would be used to reduce uncertainties and discover the structure of the code. The elements of the structure that he would discover would be related, but not completely dependent upon, his total language development which may or may not be reflected in his oral production. It is the teachers' skill in choosing the methodology or strategy that will assist the child in discovering the regularities that lead to the structure. It may be useful at this time to reflect about some prior research in the reading area as it relates to the issue.

Hall, in his book, Silent Language, defined experience as something man projects upon the outside world as he gains in its culturally determined form. This definition is close to the position stated here, that is, the child is shaped by experience but constructs it himself. For example, a kindergarten child announced at dinner that "tomorrow the principal is going to teach us how to make holes with fire." Based on his experience with tools, that is how he interpreted the teacher's statement that the principal had told her they were to have a fire drill tomorrow.

The late David Russell used the example of the ease with which second graders would have with the word 'resuscitator' and the difficulty with the phrase 'overcome with smoke'.

The literature relating the importance of oral language is replete with examples of partial relationships, that is, the point of view taken in this paper is that the research does not adequately explain the relationship. For example, Hildreth's 1964 summary indicates that:

1. words children used in their own speech are easier to read in print than words they do not use
2. the richness of the child's language is related to reading success.
3. deficient readers are deficient in oral language
4. speech defects are related to reading problems.

For example, Kirk (1940) would suggest that a child cannot excel in reading without a good oral language foundation. Robinson (1946), Milver (1951) and others suggest that the critical skill to be mastered to insure reading success is the child's mastery and comprehension of

sentences and phrases. Earlier it was demonstrated (Anastasiow, 1966, 1967) that children who had difficulty in either a linguistic reading program or a look-say program could be identified by speech ratings of spontaneous verbal fluency and articulation.

Birch & Belmont suggest that intermodal matching is the basic process, that is, matching print with auditory or spoken information. Other research has stressed the importance of visual modalities and motor patterns. The problem, as Pich points out, is that human characteristics are not independent of each other and each may be an important but not sufficient element in predicting success in reading. However, Gibson has ably demonstrated that it is the rules of orthography and the rules for generating spelling patterns that carry over into reading. What is of equal importance is that a set to look for structure in a word can be developed, and this problem solving ability can transfer to new problems. These findings have been observed in a variety of ways and are reported in the annotated bibliography. As Hartzig, Birch, Thomas and Mendes (1968) suggest many economically deprived children have been trained to respond to cues that do not lead to school success.

In our work with poverty children it was attempted to obtain a more accurate measure of the child's language capacity than is obtained using traditional means. We used a technique used by Menyuk, Baratz, Shuy & Slobin in which the child is asked to repeat a sentence spoken to him. The earlier research had indicated that young children would make errors (or miscues) with elements of the sentence beyond their stage of language development (Lenneberg). It was our hunch that inner-city black children, who have been described as possessing "language deficits", did not lack

language but rather had mastered a variant of middle-class English. It was predicted that when we asked these children to repeat standard sentences, they would reconstruct these sentences into their own language. This reconstruction on the part of the child would be taken as evidence both of the fact that economically deprived children do possess language but of a different type, and that incoming auditory input is reconstructed by the child. We expected differences in rules used for verb declension, consonant cluster reduction, devoicing of word, pronominal opposition and /r/ and /l/ deletions.

We found that these children when asked to repeat the sentence, changed them to conform to their own variant. For "He'll be good," they repeated "He be good", or "Her be good", or "She be good". For "We'll go to the zoo tomorrow," they tended to use "We go to the zoo tomorrow." Almost all miscues in the sentence of "Did the accident happen while your mother was in the store?" were in the changing of 'while' to 'when'.

If their answers which maintained the meaning of the sentences were used as correct, the errors dropped considerably. We suspect that as teachers we have, as McNeil suggests, focused on the peripheral aspects of language (phonology and morphology) rather than on semantics and syntax. That is, we have diagnosed and planned reading experiences based on the errors a child makes in pronunciation and articulation rather than on how well he maintains meaning and understands what is said.

Our evidence suggests that many children who possess poor language skills or are judged as having low ability actually display a capacity for apparent rapid thinking. For example, the child who, in response to "I asked him if he did it and he said he didn't do it," says "I asks him did he did it and he says he didn't did it" in less than a second

pause, has an active thinking process which he uses to reconstruct into his own variant of middle class English, and then in turn to repeat the sentence in his own language. We believe that these children possess a far more active intelligence than is judged by previous research.

Any sample of a child's oral language must focus on what is "right", i.e., is meaning maintained; if so, the child's phonological and morphological errors may overshadow an active intelligence.

It may be well for us to remember that any test score or observation of a child is only a score on which to base further study. Readiness implies that the child is ready to comprehend instruction. Many deprived children as discovered in the Educational Improvement Project in Durham or in Mrs. Georgia Cooper's project in Contra Costa County, California, have poor scores on measures of articulation and spontaneous verbal fluency but, given training in auditory skills to both decode spoken language and to understand what is required of them, can and do learn how to read standard English with remarkable success. It becomes the teacher's job to plan ways for the child to understand that initial reading is composed of understanding that letters stand for sounds and that there is a relationship between their own language and the letter-sound correspondence of reading and spelling.

Lets consider another example, a teacher visiting a demonstration school arrived at a second-grade classroom carrying her purse, a large bag and wearing a coat to ward off the cool morning air. The class was already in session as she took one of the seats provided for observers in the rear of the room. She placed her purse and bag on the floor beside her chair. She sat for a moment, then reached for her purse and

rummaged through it, picking out her glasses. She dropped her purse carefully to the floor and put on her glasses. A few seconds later she picked up her purse, fingered through it again, found a piece of tissue, cleaned her glasses, and set the purse back on the floor. Barely settled, she reached for her bag and pulled out a clipboard. Next, she put the clipboard on the floor, picked up the purse, and searched until she found a pen. She then retrieved her clipboard and began to observe. Moments later, she placed both clipboard and pen on the floor, stood up, removed her coat, carefully smoothed it over the back of the chair, sat down, and picked up her clipboard and pen.

At this point a small second-grade pupil, who had been observing the visitor's activity, walked up to her and asked, "Are you making a nest?"

It is the teacher's responsibility to diagnose when children are perceiving activities as nest building rather than focusing appropriately on what is being taught and the skills that are to be mastered.

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